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Memorandum

From: Steve Willis
To: Wayne Miller
Date: May 12, 2016
Subject: Review of *Draft Five-Year Review, Former Williams Air Force Base, Mesa, Arizona.*

Wayne,

UXO Pro has completed a review the referenced document and comments are included on the following page.

Please contact me if you have comments or questions regarding this document review.

Thank you,

A handwritten signature in black ink that reads 'Steve Willis'.

ATTACHMENT 1

UXO Pro Comments on the Draft Five Year Review, Former Williams Air Force Base

General Comments:

1. Protectiveness Statements – ADEQ has significant concerns regarding the long-term protectiveness of the OU-2 ROD Amendment 2 remedy. Significant contamination remains at the site following SEE system shut-down. Given the fact that the extent of contamination remains uncharacterized, the long-term effectiveness of EBR and MNA is questionable. The statement should address these concerns.

Specific Comments:

1. Page ES-1, lines 216-218. The document states that the LF004 soil remedy "is expected to be protective of human health and the environment, and in the interim, exposure pathways that could result in unacceptable risks are being controlled." Please revise this to state that the implemented Institutional and Engineering Controls ensure short-term protectiveness.
2. Page 1-1, Section 1.1, lines 390-391. Remove the phrase "expected to be."
3. Table 1-1, page 1-6. Site DP at Building 1069. Please clarify the reference for the quoted text. The formatting makes it unclear if this quote is from the subsequent reference to BEM, 2005.
4. Page 4-11, Section 4.2.2.3.2, last sentence. Please include the end date for the mass removal estimate.
5. Page 4-11, Section 4.2.2.3.4, last sentence. The phrase "varying amounts of LNAPL present in the core of the plume" should be extended to include the presence of LNAPL in perimeter monitoring wells.
6. Page 7-2, third bullet, Early Indicators of Potential Issues. Groundwater analytical results have raised the possibility that contaminants have migrated beyond the radius of influence of the remedial system at wells LF01-W29S, LF01-W31S, and LF01-W31M. Please address this possibility in the statement.
7. Page 7-9, Section 7.2, Line 2289. Change "Amendment 1" to "Amendment 2."
8. Page 7-9, fourth bullet, Early Indicators of Potential Issues. ADEQ has serious concerns regarding the effectiveness of the OU-2 ROD Amendment 2 remedy. Groundwater analytical results have raised the possibility that contaminants have migrated beyond the site boundary during remedy implementation. In addition, a significant amount of contamination may remain within the thermal treatment zone, which may not be effectively addressed by enhanced bioremediation. Please address these potential issues.
9. Page 7-11, Section 7.2, Question C. The discovery of a significant amount of LNAPL outside the limits of the thermal treatment zone is new information that raises concerns regarding the long-term effectiveness of the remedy. Please include this information.

10. Page 7-16, Section 7.3, first bullet. The discussion should include the soil and soil gas confirmation sampling conducted in August 2015.
11. Page 7-16, Section 7.3, line 2392. Words are missing from the sentence.
12. Page 8-1, Section 8.2 OU-2. The long-term protectiveness of the remedy is questionable due to the fact that the contaminant plume remains uncharacterized, and questions remain as to the ultimate effectiveness of the Enhanced Bioremediation and MNA portions of the remedy. These issues should be discussed.
13. Page 9-1, Section 9.1 OU-2 Recommendations. The recommendation should include adequate characterization of the contaminant plume to ensure long-term protectiveness.